

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Postmaster: If not
deliverable return to
K. C. Livermore
Honeoye Falls, N. Y.
Return postage guar-
anteed.

Pedigreed Seeds For Progressive Growers

Sec. 562 P. L. & R.
U. S. POSTAGE
PAID
Honeoye Falls, N. Y.
Permit No. 2

LIBRARY
RECEIVED
MAR 24 1938
U. S. Department of Agriculture

Lenroc Oats
Haberlandt Soys
Hybrid Sweet Corns
Cornell 29.3 Field Corn
Warba, Chippewa, Katahdin Potatoes



Kent Wild White Clover

Cornell Pasture Mixture



PEDIGREED SEEDS

Hybrid sweet corn,
field corn, potato, oat,
cabbage, field pea, bean,
barley, wheat, soy bean,
rye, alfalfa, clover, grass,
other forage crop seeds.



HONEOYE FALLS, N. Y.

FARM CHEMICALS

Seed disinfectants,
seed inoculants,
fertilizers, sulphur,
gypsum, lime,
dust & spray materials.
Also drain tile.

To Old Friends and New:—

Greetings and kind wishes. Eighteen years ago, our neighbors came to buy seed from an extra fine crop of oats we had grown from a Cornell bred strain and seed potatoes from the first certified crop grown in the locality. That was the beginning of our seed business. Other items were added from year to year, more land acquired, more equipment assembled and more help employed, till today some 1500 acres of seed crops are grown here and seed from as many more acres in other States or countries is brought here to be resold.

Our seed offerings are limited to varieties and strains of proven worth and from sources that have been proved best. Seed selection, testing and treating, crop fertilizing, dusting or spraying, careful handling, proper storing, thorough cleaning and grading are all done systematically, to the end that our seeds may be as high in purity, germination, disease freedom and weed freedom as is possible. The seeds we have to purchase from other sections are of the best quality obtainable.

Please read carefully the descriptions on pages 1, 2, 3 & 4. We have tried to make them concise, specific and accurate. Prices of seeds and seed treating materials and other farm chemicals are given on pages 5 and 6.

Hoping to serve you and wishing you a successful season, I am

Sincerely, K. C. LIVERMORE

Oats, Barley, Peas and Mixtures

All the following are experiment station developed strains. They have proven their superiority in hundreds of tests in the Northeast.

Our seed is thoroughly recleaned and well graded with modern equipment by experienced operators. It is free from weed seeds and does not need treating. Germination on all lots is 90% or better, on most of them over 95%.

LENROC OATS - For 15 years or more, the highest yielding and highest feed value oat in most of New York has been Cornellian. Unfortunately, Cornellian was of unattractive appearance. The kernels were small, slim and grayish, sometimes almost black.

The plant breeders at Cornell undertook to combine in a new oat the high yielding ability, high feeding value and good straw characteristics of Cornellian with larger and whiter kernel characteristics from another oat. Cornellian was crossed with other varieties and out of the various oats resulting, one combined all the desired characteristics. After more than 10 years of careful testing, not only at Ithaca, but in various parts of the State, the new oat was christened Lenroc and released for commercial production.

Lenroc has regularly averaged a higher yield than Cornellian and other improved oats used in New York State. Lenroc usually out-yields the Swedish type oat, of which scores of carloads are annually shipped into New York State for seeding purposes, by 10 to 15 bushels per acre. It usually outyields Upright by 5 to 10 bushels, Victory by 3 to 8 bushels, Ithacan and Cornellian by 1 to 3 bushels per acre. These extra bushels usually mean the difference between little or no profit and a satisfactory profit on the oat crop.

Compared with using one's own oats for seed, an extra investment of about a dollar per acre in Lenroc oats will give a crop of oats enough bigger and better to more than offset the taxes on the land, not only the first year but for future years, too.

The Lenroc oats grown and sold by Quaker Hill Farm have been College inspected and are certified. In fact, most of the lots offered have met the higher requirements of registered certified.

It will pay the majority of oat growers in New York State very well to change to Lenroc oats, and the sooner the better. No better seed is available than that from Quaker Hill Farm. Don't delay. Order today. See prices page 5.

CORNELLIAN OAT - Second only to Lenroc in the Northeastern States. High feed value. Usually weighs 3 to 10 pounds more per bushel than other varieties. Slim, gray kernels. Sold out.

UPRIGHT OAT - Outstands all others. Safest on rich or low land. Ranks high in grain yield, highest in straw yield. Best oat for green feed or hay. Large white kernels. Sold out.

ALPHA BARLEY - Two row hybrid, wide adaptation, excellent straw, one of highest yielders in Northeastern States. Ripens with Cornellian oats. Best for mixtures with oats. Best for milk production but not for beer.

WISCONSIN 38 BARLEY - Smooth bearded, 6-rowed hybrid. Yields little more than Alpha. Straw weaker. Not so good for mixed sowing. Best for beer.

WHITE CANADIAN FIELD PEAS - One of the best in yield of grain and vine growth. Grown in Idaho to escape blight infection. They are 100% disease free. Blight infected seed is unsafe.

GRAIN MIXTURES - We offer Cornellian Oats and Alpha Barley with or without field peas in proper proportions. These high yielders, ripening together, make the cheapest home grown feed.

GREEN FEED OR HAY MIXTURES - Oats and peas make a very nutritious green feed or hay that cattle relish. A patch handy to the lane or pasture is worth a lot when pastures dry up. Our mixture of Upright Oats and disease free peas yields considerably more forage than other varieties. See prices page 5.

Field Corn

The following best meet the needs of nearly all sections of the North Eastern States. In each case, we offer seed from specially bred strains backed by years of careful selection. Germination on all lots 90% or better and seed is extra well graded. See prices page 5.

CORNELL 29-3 HYBRID - This new corn is recommended for silage wherever West Branch Sweepstakes or corn of similar maturity has been used and for grain wherever Cornell No. 11 matures, in other words a large part of the North Eastern States. Station and farm tests have proved its merits.

Out of hundreds of inbred strains developed by Cornell plant breeders, certain pairs have been found which, when crossed produced hybrids of great vigor. After many trials it has been found that when certain of these better hybrids are crossed with each other, still more vigorous and still better yielding corn is secured. Using inbreds of Luce's Favorite, Onondaga White, Cornell No. 11 and Bloody Butcher in this way, Cornell 29-3 double crossed hybrid is produced.

It matures in 110 to 115 days, a little after Cornell No. 11. In silage tests at Ithaca and in other parts of the State, it has equalled Sweepstakes in green weight, exceeded it in dry weight by 15% to 20% and in grain by 10% to 50%. In actual food value it generally yields 25% more than West Branch Sweepstakes, when grown for silage in New York. It grows more rapidly and more uniformly. It is leafy, ears heavily and matures just right for silage here in New York and parts of adjacent states. The risk of weather damage is less than with later varieties.

It can be grown for grain wherever Cornell No. 11 succeeds and usually yields 15% to 30% more shelled corn than Cornell No. 11, occasionally as much as 50% more. The ears show variations in the direction of all four parents, but mostly they are medium sized ears of dent or semi-flint type, reddish, yellowish or whitish in color.

Compared with most of the corn varieties now in use, in New York for silage or grain, Cornell 29-3 usually produces \$10.00 to \$15.00 more value per acre. The extra cost of the seed is only 75¢ to \$1.00 per acre. Using Cornell 29-3 means more profit.

The 29-3 seed you buy may be either a red dent kernel or a white to yellow semi-flint kernel, depending upon which of the two parent hybrids was used as seed parent. We have both kinds. They will produce alike.

The value of any lot of hybrid seed depends not only on the purity and germination, but also on the care and thoroughness with which the cross pollinating is accomplished. At Quaker Hill Farm, hybrid seed corns have been produced since 1931. We have acquired the experience, skill and equipment necessary to put out high quality seed.

In all such hybrids, the superior qualities are found only in the first crop from the crossed seed. Later crops lose their uniformity and vigor soon. It does not pay to save seed from them.

WEST BRANCH SWEEPSTAKES - The second best silage corn for most of this part of the country. Vigorous grower, leafy stalks, 9 to 11 feet. Big ears of various shades of red and variable type. Makes large tonnage of high feeding value. Matures 130 days.

CORNELL No. 11 - Highest yielding 100 to 110 day yellow dent. Averaged nearly 70 bu. shelled in N. Y. tests. About 13T. easy to handle silage with 1-¼T. grain per acre. Better than large corns where seasons are short. Our strain is medium early and a wonderful yielder of fine type yellow corn.

YATES FLINT - A very early high yielding corn of hybrid origin, 90 days here. Stalks 6 ft. to 7 ft. Ears large yellow to red mostly amber, 12-rowed. Kernels small. Poultry like it whole. Sold out.

SHEFFIELD - Eight row flint developed in Berkshire Mts. Very early. Good yielder. Ears medium size, dark yellow. Stalks medium.

The flint corns are wilt susceptible and should not be used in wilt areas. See prices page 5.

EVERY GOOD HARVEST COMES FROM GOOD SEED

“Never had as much or as good sweet corn as last year from your seeds.” C. C. W., Salem, N. Y.

Quaker Hill Hybrid Sweet Corns

SEE PRICES ON PAGE 5

They actually yield 25% to 100% more than the old favorites, are much more uniform, have high quality and most of them are resistant to the dread wilt disease. The seed is produced by controlled cross pollination of two or more specially bred strains. The seeds cost more, but results justify the cost many times over. Hybrid sweet corns are rapidly displacing the old kinds,

We offer nine hybrids that ripen at different times, each one of the best available in its ripening period. One can choose those that best suit his market or can provide a continuous supply from early to late by planting at one time several that will ripen in succession and then follow with successive plantings of a late one.

WILT DISEASE WARNING

Last season wilt disease of sweet corn moved north again and in the east was more or less serious in New Jersey, South East Pennsylvania, and Long Island. It was seen in Southern New York and Connecticut. The mild winter just passed threatens spread of this dread disease further north in '38. Every sweet corn grower in areas likely to be affected should plant only hybrids of proven resistance. Supplies and prices of good sweet corn probably will be affected.

In the brief descriptions given below, the maturity dates are approximate for this section and naturally vary with locality and season. They are comparable with Golden Bantam at 80 days. For more complete descriptions ask for our sweet corn circular.

Yellow Hybrids - Mostly 12-rowed, some 12 to 16 rowed.

COCKCROW - 68 days, earliest hybrid on the market, good yield, fine quality. Wilt resistance not proved. Not recommended for wilt areas but elsewhere is best bet for first-on-the-market profits and satisfaction.

SPANCROSS P.39 - 72 days, very prolific, wilt resistant, fine type. Our stock has proved a money maker. In several tests it has outyielded Spancross from other sources by significant margins.

GEMCROSS P.39 - 72 days, larger ears, high yield, good quality, wilt susceptible. Has proved very satisfactory north of the wilt areas. Only round kernels left, at 5¢ less per lb. *

WHIPCROSS C6.2 - 74 days, very uniform, larger ears, wilt resistant. Only round kernels left, at 5¢ less. *

SUNCROSS P.39 - 76 days, dandy quality, fairly wilt resistant. Only round kernels left, at 5¢ less.

CHARLCROSS C.2 - 76 days, very good quality, uniformity and yield; some wilt resistance, but not well tested.

QUAKER HILL OK - 80 days, better in size, yield and quality than our Whipcross P.39, which it replaces. Wilt resistance O. K., too. Six days earlier than Golden Cross.

QUAKER HILL XL - 82 days, outstanding in sweetness, flavor and tenderness. Equals Golden Cross in yield and size. Highly resistant to wilt. Be sure to plant some Hybrid XL.

GOLDEN CROSS - 86 days, has proved highly satisfactory where length of season and market requirements are satisfactory. Very resistant to wilt. Quaker Hill Golden Cross in 8 outside tests last season tested 15% better than the average of Golden Cross from other sources included in the tests.

White Hybrid - 12-14 rowed.

REDGREEN - 92 days, sweetest, tenderest white, heavy yielder.

* Note. The round kernels offered at 5¢ less per lb. after the flat kernels are sold, are heavier and run about 85% as many kernels per pound. Plates with deeper pockets are necessary in some planters, to handle them. They produce as well as the flat kernels.

See prices of Hybrid Sweet corns on page 5.

Family Garden Assortment

Everybody likes sweet corn. Nothing smells or tastes so good. It's healthful and nutritious, too. But was there ever a summer when your garden supplied it as long as you wished? Usually, it's feast for a few days, then only memories until next summer. To remedy that was the idea behind our Family Garden Assortment.

Here is a package of assorted hybrid sweet corn seeds, ripening in succession, that provides an average family with an abundance of delicious fresh sweet corn from early summer till fall, and plenty to can for winter. It includes 4 oz. each, Cockerow, Spancross, Quaker Hill OK and 1 lb. Golden Cross, with directions for planting. Lots of enjoyment and real savings on food costs come in this package. Decide now to feast on sweet corn this summer. For health and happiness and — yes, for food economy too, plant our sweet corn assortment. Price \$1.00 post paid in U. S. In Canada \$1.20.

Pop Corn

SOUTH AMERICAN YELLOW - Large stalks, ears and kernels. Yellow. Large yielder. Late. Finest popping quality. Most profitable to grow, but requires long season, at least 120 days.

JAPANESE HULLESS - Small stalks, ears and kernels. White. Lower yielder. Excellent popper. Very tender.

Spring Wheat

MARQUIS - Best available. Hardy seed from Northwest. Should be planted early. Requires cool climate.

SARTOV - A better variety for the Northeastern States. Not yet available. Details next year.

Seed Potatoes

Seed potato value depends mostly on (1) freedom from diseases carried in the tuber, (2) the breeding back of the strain and (3) condition of the seed. The first two cannot be told by appearances, yet are most important. The buyer must depend on the certification tag and the word of the seller.

For two of our certified fields, the inspectors reported no disease, and for the others only a trace (less than 1 in 1,000 plants) was reported. The lots from Maine and Prince Edward Island were reported free or very nearly free from diseases. The not certified lots were grown from certified seed and especially for seed use. All lots are backed by years of careful breeding. They are Northern grown, well stored, well graded.

NEW VARIETIES

In recent years, more new varieties of potatoes have been introduced than in the preceding 50 years. On the basis of their performance records in numerous trials, Warba, Chippewa, Houma and possibly Katahdin, deserve recognition in this area. Growers should not be too slow in adopting them. See prices page 5.

WARBA - Originated by crossing at the Minnesota Agricultural Experiment Station in 1926. Ten to 14 days earlier than Cobbler and has generally outyielded it on both mineral and muck soils in many parts of the Country. Quality is very good. It resembles Cobbler, but has pink eyes. Mosaic resistant; susceptible to scab, leaf roll, etc.

Warba has everything that Cobbler has and in addition, yields more and is definitely earlier. It should replace Cobbler in many places — especially where earliness is important and on muck soils. Southern planting plans indicate higher summer prices for potatoes than last year. Better plant Warba for your summer supply and to market, too. We offer New York and Maine, certified.

IRISH COBBLER - For many years the main early potato. Round, white, deep eyed tuber of excellent quality. We have found Prince Edward Island Cobbler seed most satisfactory. We offer certified seed from there and not certified Cobblers grown here from P. E. I. foundation stock.

CHIPPEWA - Developed by potato breeders of the U. S. Dept. of Agriculture. Has been thoroly tested. Week later than Cobbler, week earlier than Green Mountain and Katahdin, 2 weeks earlier than the Rurals. Beautiful, white, flattened potato with few and shallow eyes. Cooking quality fine. Seems well adapted to all soils and sections of the northern states. It is resistant to mild mosaic, susceptible to scab like Cobbler, more susceptible than the Rurals. Has made splendid yield records, in numerous tests nearly always outyielding Cobbler and usually Green Mountain and Katahdin. Chippewa seems destined to replace part of the Cobblers, Mountains and Rurals. Every potato grower in the North East should give them a trial. We offer N. Y. and Maine certified.

GREEN MOUNTAINS - Mid-season variety. Requires cool moist climate for best yields. We have Prince Edward Island certified seed, also N. Y. seed not certified, but grown from P. E. I. certified seed.

KATAHDIN - Also a recent production of the U. S. Dept. of Agric. Matures with Green Mountain or a few days later, a week earlier than Rurals. Fine appearing, white-skinned, round, flattened potato of very good quality. Mosaic resistant, scab susceptible. Sets lightly but develops nearly all No. 1 size potatoes. Grown extensively in Maine, but yield records in New York so far are not encouraging.

RUSSET RURAL - Deep rooted hardy late potato that yields well under adverse conditions. Under favorable conditions it has made record yields in the East. Our Quaker Hill strain comes from a 22 tuber hill. It has outclassed several hundred other selections in our elimination tests continuing since 1926. No better bred strain is available. We offer certified and not certified seed.

WHITE RURALS - Smooth or White Rurals have same adaptations as Russets. Preferred on some markets. We offer seed from a well bred, high yielding, fine type strain. Certified and not certified.

HOUMA - New, late, white potato available next year.

GRADES AND SIZES

Besides the two field inspections for disease, purity and general condition, our certified potatoes have to pass a grade inspection at shipping time. All our seed is sold as U. S. No. 1, 1-7/8" to 12 oz., or U. S. No. 1, 1-1/4" to 1-11/16". The latter we call the "Plant Whole Size."

PLANT WHOLE SIZE YIELDS BEST

It includes all the potatoes of the right size to plant whole without labor of cutting or waste of seed or bother in planter. It plants further, makes better stands and actually yields more — if it is from a crop that was practically 100% disease free. Many successful growers now save money and make money with Quaker Hill Plant Whole seed. See prices page 5.

Buckwheat

Valuable as a substitute where other plantings have missed, also to plow under and for bee pasture.

JAPANESE - Larger plant, larger kernel, larger yield. Requires better ground. Better for cover crop. 3 to 4 pecks per acre.

SILVERHULL - Smaller plant, smaller kernel. Better flour and feed. 2 to 3 pks. per acre.

“Seed Potatoes From You Last Year Did Better Than Any Previously Grown Here.” H. E. H., Poughkeepsie, New York

Cabbage

All our cabbage seed is double treated, with hot water and with Semesan, to protect against any diseases that might be carried in or on the seed and pre-emergence damping off.

A mild winter promises plenty of insect trouble. Better plant seed in a windy location. Use calomel and tobacco dust to prevent flea beetles and maggots. Apply before they appear; after is too late. Be prepared to fight cabbage worms with lead arsenate and lice with nicotine dust. We can supply you. See prices page 5.

LOUISIANA COPENHAGEN - 57 days from setting plants, 6 days earlier than Golden Acre. Ripens more uniformly. 90% ready to cut in the first week. Average weight 2.6 lbs. More compact, smaller core, better texture, darker color than Copenhagen.

GOLDEN ACRE - 63 days from setting. Fine type, early strain developed from Copenhagen Market. Smaller heads but more uniform and compact.

COPENHAGEN MARKET - 73 days. A good yielding, fine type, more uniform ripening strain.

GLORY OF ENKHUIZEN - 85 to 90 days. Heavy yielding strain, large round heads, even ripening.

QUAKER HILL DANISH - 110-115 days. One of three best in New York and Pennsylvania tests. Every kernel grown here from selected mature heads. More than 20 years' skilled selection has produced superiority in yield, shape, solidity, color and keeping quality. The fact that hundreds of successful cabbage growers will pay \$2 to \$4 more per pound year after year for Quaker Hill Danish, proves it. This extra cost is repaid several times over.

REED'S RED DANISH - Best of all reds. Nearly every plant makes marketable head. Very good size, wonderfully solid, beautiful color. No later than White Danish and yields nearly as well.

Soy Beans

Soy bean hay and grain have high feeding value. The beans contain 30% digestible protein and 14% digestible fats. The crop is valuable too for soil improving purposes. Their use is increasing rapidly all over the Country. For grain, plant $\frac{1}{2}$ to 1 bu., according to size in 28 in. drills and cultivate; or plant about 1- $\frac{1}{2}$ to 2 bu. with the grain drill or broadcast. Plant shallow, 1" to 2". Use the weeder as soon as the plants are 4 in. to 5 in. high and again in a week, if necessary. For hay or plowing under, plant 2 bushels with the grain drill. For silage, plant 20 pounds with usual amount of corn. Inoculate soy beans with Nitragin Culture "S". See prices page 5.

The best varieties for the Northeastern States are:—

CAYUGA - Another contribution from the New York State College of Agriculture. Early enough to mature anywhere that corn ripens. Matures 90 to 100 days. Upright growth, 2 to 3 feet. Yields 25 to 35 bushels, small bluish black beans. Best for grain to feed but not for other purposes.

MANCHU - About 110 days to maturity. Satisfactory for planting with early silage corn or plowing down.

WILSON - About 120 days to maturity. Occasionally matures grain here, but is recommended primarily for hay, because of large yield of finer stems and branches. Best for plowing down. Smallest seed.

HABERLANDT - About 125 days to maturity. Cornell tests showed this to be the best soy to plant with such silage corns as Cornell 29-3 and Sweepstakes. A non-spreading, upright type of growth permits harvesting with little loss of beans, leaves or stems. Haberlandt reaches best stage of development when corn is ready to cut. Earlier maturing soys decrease corn yields by taking more food and water, and increase loss of beans by shelling. Later maturing soys do not produce enough beans to justify the extra costs. It is important to use a soy of the right type and right maturity with silage corn. Haberlandt is best for most of this area.

Be sure to inoculate soys with Nitragin S.

Field Beans

Our seed is carefully graded for seeding purposes and is hand-picked. See prices page 5.

ROBUST PEA - High yielding, disease resisting, late maturing, small pea bean of fine type and broad marketability. Susceptible to one strain of anthracnose.

PERRY MARROW - Our strain developed by plant selection for large jumbo type. Disease resisting to high degree except root rot. Upright growth, little spotting, excellent yielder. Requires care in threshing. Few days earlier than Robust. Readily marketable.

YELLOW EYE - Fairly disease resistant, earlier than Robust. Limited market.

CALIFORNIA RED KIDNEY - Free from blight infection. Resistant to anthracnose. Safer to plant than local grown red kidneys which usually carry blight infection. Seed hand picked.

FRENCH'S WHITE KIDNEY - Very vigorous growing, disease resisting, and high yielding. Slightly different in type from true white kidney. Limited market.

HELPFUL HINTS

Avoid maggot injury (snake heads) by planting before or after the maggot hatching period. Ask your Farm Bureau. Some growers report increased yields from inoculating field beans with Nitragin D. Beans respond most to superphosphate.

Alfalfas

Most profitable forage crop where conditions are favorable. Good stands last four to ten years. Plenty of lime, good drainage, fertile soil, weed elimination, seed inoculation, hardy seed and right variety, plus good judgment, are essential for successful stands. Prices page 5.

COMMON - Long tap rooted kind, better for, and suited only to, deep, well drained, gravelly or sandy soils with natural supply of lime. On such soils it draws food and water from the sub-soil and thrives even when summer rains are light. Not adapted to shallow or heavy soils. For this area only Northern grown hardy seed, should be used. We have this kind and it is of the highest purity and germination we can buy.

GRIMM - Branch rooted, variegated blossomed type, better for heavy, shallow or poorly drained soils. Resists winter heaving and is most winter hardy. Because shallower rooted it is more dependent on current rainfall and applied fertility. Hardy northern grown seed is necessary for this area. We offer Idaho Certified Blue Tag Grimm and Michigan and Idaho Grimm not certified. All are of high purity and germination.

ONTARIO VARIEGATED - Branch rooted type of great hardiness, developed in Ontario, Canada. Same adaptation as Grimm. Import regulations require 1% of seed be dyed violet. Our seed is of highest quality.

Clovers

MEDIUM RED - Month earlier than Mammoth and than Timothy. Smaller than Mammoth, but usually makes second growth for hay or pasture or seed. Seldom survives second season after seeding. We handle only hardy northern grown seed of government verified origin and of first quality. Imported seed is not reliable.

MAMMOTH RED - Larger and later than Medium, also longer lived and generally hardier. Only one cutting a season. Ripens with timothy, red top, etc. We offer Michigan grown seed of top quality.

ALSIKE - Smaller, less upright in growth, longer lived than the red clovers. Will grow on soils too wet, dry, acid or poor for red clover. Often used in pasture mixture.

WHITE BLOSSOM SWEET CLOVER - Hardest, rankest growing of the clovers. Earliest in the spring, latest in the fall. Valuable, first, for soil improving, next for temporary pasture, last for hay. Lives only two seasons, but will self seed if allowed. Spring and summer are best times to sow. Use scarified seed, which germinates more quickly. In spring grains sow two weeks after the grain, so clover won't be too high when grain is harvested. Fall sowing not safe here. Unscarified or unhulled seed may be sown late in the winter on pastures, winter grains, or open ground.

For soil improving, plow under when 12" high, for potatoes, corn, etc., or allow to reach full height and then plow for fall or next spring's crops. Plowing under in the spring must not be delayed, or loss of soil moisture may offset benefits from the clover.

When grown for pasture the first summer's growth may be turned into when 6" high, but should not be pastured too closely. Start pasturing the next spring when 6" high and stock heavily enough to prevent rank growth.

For hay cut before blossom buds appear — before stems become tough or woody. A hay crop can be produced after pasturing to June. It is important to mow sweet clover high — that is above the first branch. Otherwise there will be no further growth.

WHITE DUTCH - Dwarf type, perennial clover, used for pastures and lawns with Kentucky blue and other grasses. Requires good supply of lime.

KENT WILD WHITE - Best clover for pastures and lawn. Recommended by Cornell pasture experts and approved in Soil Conservation Program. Hardier and more productive than White Dutch. Flowers less, spreads rapidly, makes denser sward and pasturage richer in protein. Also increases growth of other pasture plants by supplying nitrogen and keeping soil cooler and more moist by the mulching effect of its dense growth.

In a Cornell test, Kentucky Blue Grass plus Kent Wild White Clover produced five times as much feed as Kentucky Blue Grass alone. Seed only one pound per acre, preferably in Cornell Pasture Mixture. or if no better way, broadcast on established pasture, when ground is honeycombed with frost.

Mix the seed with fine sand or other carrier to help sow evenly. Our wild white clover seed is Registered Grade A, harvested from old pastures in County Kent, England, inspected and approved by experts at Cambridge. The seed has been examined, tested and approved also at the State Seed Testing Laboratory at Geneva Experiment Station, Geneva, New York.

ENGLISH WILD WHITE - Same as above but from another county and not registered. Approved for Cornell Pasture Mixture.

YELLOW TREFOIL - A small legume similar to alfalfa, especially adapted to pastures. Not perennial, but reseeds freely and so persists. Palatable and nutritious. Will grow where white clover will not. Sow 15 to 20 lbs. alone or 1 lb. in pasture mixture. Used in Cornell Pasture Mixture. Our seed is imported, and approved by the Geneva Seed Testing Laboratory.

Timothy

Most extensively used grass, because seed is cheap, yields well first two seasons, cures easily, is palatable. While fed mostly to horses, it has more merit for dairy cattle, if cut early, than is generally recognized. See prices page 5.

COMMON - Northern grown, of the highest quality obtainable. Purity 99.50% or better.

CORNELL NO. 1777 TIMOTHY - Best selection out of hundreds tested by Cornell Plant Breeders. Very uniform, medium height and maturity, very leafy, fine stemmed, retains green color long, rust resistant. Yields 25% to 30% more than ordinary timothy — better quality. Used also in pasture mixture. Sold out except in the Grade A Cornell Pasture Mixture.

TIMOTHY AND ALSIKE MIXTURE - This natural mixture saves a little on seed costs, altho proportions are not best and weed content is often high. Our mixture contains 20% or more alsike and has low weed content.

Recommended Hay Seedings

For soil conditions as shown at left, sow the following amounts per acre:—

	To cut one year
Good	Mammoth or medium red clover, 10 lbs.
Mixed	Red clover 4 lb., Alsike clover 6 lb.
Poor	Alsike Clover, 8 lb.
	To cut two years or more
Good	Medium red clover 3 lb., Alfalfa 6 lb., Timothy, 6 lb.
Mixed	Medium red clover 3 lb., Alsike clover 4 lb., Timothy 8 lb.
Poor	Alsike clover, 5 lb., Timothy 5 lb., Red top 5 lb.
	To cut three years or more
Good	Alfalfa, without nurse crop, 12 lb., with nurse crop, 15 lb.
Mixed	Alfalfa, 8 lb., Alsike clover 2 lb., Timothy 5 lb.
Poor	Alsike clover 5 lb., Timothy 5 lb., Red Top 5 lb.

Miscellaneous

KENTUCKY BLUE GRASS - Basis of most good pastures and lawns in the Northeastern States. Ability to spread, fine tender leaves, palatability and winter hardiness are its strong points. Shallow root system and consequent drying up in drought periods is its weakness. Full production is not reached till the third or fourth year. Requires lime and good drainage.

CANADA BLUE GRASS - Smaller, less palatable, poorer yielder than Kentucky, but grows on more acid, wetter and poorer soils, where Kentucky will not grow.

ORCHARD GRASS - Tall, tufted grass, coarse stems, not so well relished by stock. However, it is very early and stands drought well.

RED TOP - Second important hay grass. Not as salable, not as heavy yielder as timothy, but stands wet, acid or poor soils better. Produces full crop hay or pasture first year after seeding.

REED CANARY GRASS - A marshy land crop. Produces large yields 3 to 6 tons in two cuttings, palatable, nutritious hay, on low overflow lands and marshes too wet for other crops. Makes tough sod that will support horses and hay machines where they could not be used before. Or, it can be pastured throughout the season and has carried 3 or 4 head per acre. Plowing and fitting are desirable, but not absolutely necessary. Seed 5 to 7 lbs. broadcast any time, but preferably late fall or early spring.

ROUGH STALKED MEADOW GRASS - Produces heavy bottom of fine leaves, relished by stock as pasture or hay. Recommended for temporary or permanent pastures and meadows to be cut 3 years or more. Seed is small, one to two pounds per acre in mixture.

SVALOF VICTORIA PERENNIAL RYEGRASS - Bred by Swedish Agronomists especially for pasture use and lawns. Makes strong sward and produces heavy crop of fine leaves of excellent feeding value. This strain of ryegrass is Cornell's first choice for use in the Cornell Pasture Mixture. Our seed is imported directly, and is certified. We have also Danish Perennial Ryegrass and New Zealand Permanent Pasture Ryegrass.

JAPANESE MILLET - Best of the Millets. Very satisfactory for green feed or hay. Planted after corn and up to July 1st, it is ready to feed green or cut for hay in eight weeks. It supplements the pasture or the hay supply. Grows well on light soils. Sow 15 to 35 lbs.

HUNGARIAN MILLET - Can be sown later - about July 10th - and must be fed with caution - not more than half the roughage. Sow 35 to 45 lbs. per acre.

DWARF ESSEX RAPE - Belongs to cabbage family. Very nutritious. Usually grown for green feed for sheep or hogs or cattle, in rows and cultivated, or broadcast. Plant 3 to 5 lbs. per acre, from May to August. Ready to feed in 8 to 10 weeks. Successive plantings extend the feeding period. Sometimes sown in spring grains and pastured in stubble. If not pastured too closely, the plants renew themselves.

SPRING VETCH - Makes high protein green feed or hay. Sow 80 lbs. per acre. Inoculate with Nitragin C. Sow at oat planting time.

HAIRY VETCH - Can be sown fall or spring, usually early fall, with rye, various proportions, 1½ to 2 bushels total. Inoculate with Nitragin C.

SUDAN GRASS - The dairyman's friend. Sudan makes pasture, green feed, hay or silage that dairy cattle relish and respond to with milk. Sow from corn planting time to July 1st, 5 to 8 lbs. per acre in rows cultivated, or 30 to 40 lbs. broadcast. Early plantings make two cuttings. Cut for hay shortly after blooming. Seed cost is low, returns high. More dairymen should provide Sudan Grass and avoid the summer slump in milk production. *

SORGHUM - Grows as tall as corn. When rowed and cultivated like corn. sow 12 to 15 lbs. per acre. When broadcast, sow 40 lbs. per acre. Relished especially by horses and cattle. *

* In drouth periods or after frost, certain poisons sometimes accumulate in sorghum and sudan grass. Great care should be used in feeding at such times. Tests can be made. Ask your Farm Bureau.

Pasture Seeding & Management

Pasturage is one of the most important crops for this part of the Country, but it never has had the attention it deserves. In England, pasture management is as much a science as growing potatoes. Strains of grasses and clovers have been developed for pasture use that are much superior to the wild forms. The Cornell plan of pasture management and the Cornell Pasture Mixture and the Hay-Pasture mixture formulas embody those English ideas which can be applied to advantage under our conditions. Tests and experience have proved this plan and the seeding mixtures practicable and profitable. Government soil conservation programs in New York recognize their merits and offer financial help in adopting them. Live stock farmers should give the pasture question much more attention.

PASTURE MANAGEMENT - Briefly, the Cornell Plan covers fertilizing, liming, methods of seeding, seed mixture and grazing management. Ask for Cornell Pasture Leaflet No. 5. It gives the details.

CORNELL PASTURE MIXTURE - At Cornell the mixture has yielded 3,000 lbs. to over 6,000 lbs. of dry matter per acre, containing over 30% crude protein, roughly, as much dry matter as in a 10 to 16T crop of silage or as much protein as in a 3 to 6T crop of alfalfa. Pastures managed according to the Cornell plan and seeded with this mixture produce more high protein feed to the acre than do most feed crops. The mixture is:—

Kentucky Blue Grass	8 lb.	Rough Stalked Meadow Grass	1 lb.
Canada Blue Grass	2 lb.	Wild White Clover	1 lb.
Timothy	6 lb.	Yellow Trefoil	2 lb.
Perennial Ryegrass	5 lb.		
		Total for 1 acre (28½ qts.)	25 lb.

We offer this mixture in two grades, as follows:
GRADE A, with certified Cornell 1777 Timothy, certified Svalof Victoria Perennial Ryegrass, Registered Grade A Kent Wild White Clover, English Grovn Yellow Trefoil and commercial stocks of the other ingredients.

GRADE B, with commercial stocks of all the ingredients except New Zealand certified Perennial Ryegrass and English Wild White Clover.

In both cases, the ingredients and the Mixture have been examined and approved by the Dept. of Agronomy, Cornell University, Ithaca, N. Y., as required of all seedsmen authorized to sell the Cornell Pasture Mixture. See prices page 5.

CORNELL HAY-PASTURE MIXTURE - This provides hay for one to three years and pasture thereafter; or one cutting of hay and the aftermath pastured each year for two or three years, and continuous pasture thereafter. It includes:—

Red Clover	2 lb.	Rough Stalked Meadow Grass	1 lb.
Alsike Clover	2 lb.	Perennial Ryegrass	4 lb.
Timothy	6 lb.	Yellow Trefoil	2 lb.
Kentucky Blue Grass	5 lb.	Wild White Clover	1 lb.
Canada Blue Grass	2 lb.		
<hr/>			

We offer this mixture with the Grade A ingredients as mentioned above. See prices page 5.

IMPROVEMENT OF OLD PASTURES - In many cases, it is impossible or impracticable to apply the Cornell program in its entirety, but usually one or more of the following things may be done, and done profitably, on parts if not all of the existing pastures.

Lime, if needed and where needed, to encourage Wild White Clover and Kentucky Blue Grass.

Phosphate poorer parts, or all of the pasture, using as much as you can afford up to 600 lbs. per acre every four years. Where drill or lime sower can't be used, apply granular superphosphate with cyclone broadcaster.

Potash if needed, on sandy or gravelly places especially.

Sow Cornell Pasture Mixture on spots or parts where stand is light. Sow early in spring when ground is honeycombed. Later sowings should be dragged in, if possible.

Sow Wild White Clover alone where there are less than 3 wild clover plants per square yard.

Mulch newly seeded spots lightly with coarse or trashy manure, corn stalks or light brush to protect seedlings.

Pasture closely enough to keep all grasses from getting over 4" tall and weeds from seeding.

Mow pastures in early July, or twice each season if necessary to keep growth of grasses and weeds down.

Alternate pastures if possible; feed down close, then let recover to 4" length.

Scatter droppings in Fall with brush drag spike tooth drag, or weeder.

TERMS

Terms are cash with order or 20% payment with order and balance before shipment or COD on arrival with collection fees added.

All prices include containers and are f. o. b. here except as noted.

GUARANTEE

We guarantee all goods to be as represented and to arrive in satisfactory condition. Please examine all shipments on arrival for shortage or damage. If any, have agent note same on your receipt. Report to us immediately and we will make it good.

If you are not satisfied with the goods received and notify us within ten days, we will replace them if possible or refund payment if preferred. We do our utmost to avoid mistakes but cannot and do not assume any responsibility for the results secured from our seeds, chemicals or other materials.

PRICE CHANGES

Prices are subject to change without notice. If lower when your order is received, difference will be refunded, if higher you will be notified and may pay difference or change or cancel order. Prices include bags or other containers and loading on cars or trucks.

SWEET CORN

All Hybrids Listed

Postpaid, 1/4 lb. 20c; 1/2 lb. 25c; 1 lb. 40c; 2 to 19 lb. 30c lb.; Freight collect, 20 to 99 lb. 23c; 100 lbs. or more 20c lb. Two lb. packages or larger take price for total weight ordered. FAMILY GARDEN ASSORT., postpaid \$1.00

POP CORN

Both Varieties Listed

Postpaid, 1/4 lb. 15c; 1/2 lb. 20c; 1 lb. 25c; 2-19 lb. 20c; freight collect, 20 to 99 lb. 15c lb.; 100 lb. or more 12 1/2 c lb.

OATS

Sacked 3 bu. per bag Per bu. 32 lbs.

30 BU. OR MORE 5c LESS Not Certified Certified
LENROC \$1.00
CORNELLIAN Sold Out
UPRIGHT Sold Out

BARLEY

Sacked 2 bu. per bag Per bu. 48 lbs.

30 BU. OR MORE 5c LESS Not Certified Certified
ALPHA, 2 rowed \$1.50 \$1.60
WISCONSIN 38, 6 rowed 1.40 1.60

FIELD PEAS

10 BU. OR MORE 10c LESS
WHITE CANADIAN, tested disease free \$3.50

MIXTURES

10 BAGS OR MORE 15c LESS
OATS & BARLEY, 100 lbs. \$3.00
Cornellian 40 lbs. Alpha 60 lbs.
PEAS, OATS & BARLEY, 110 lbs. \$4.15
Peas 30 lb., Cornellian 32 lb., Alp. 48 lb.
PEAS & OATS, 108 lbs. \$4.85
Peas 60 lb., Upright Oats 48 lb.

SOY BEANS

10 BUS. OR MORE 5c LESS
CAYUGA, new early, \$2.00
MANCHU \$2.00
HABERLANDT, best with corn for silage \$2.50
WILSON \$2.25

FIELD BEANS

CHOICE HAND PICKED

10 BAGS OR MORE 10c LESS Per Cwt.
For less than full bag add 20c to amt.
ROBUST PEA \$4.00
PERRY MARROW \$6.50
YELLOW EYE \$6.50
CALIFORNIA RED KIDNEY \$9.50
FRENCH'S WHITE KIDNEY \$10.00

FIELD CORN

Per bu. 56 lbs.

10 BUS. OR MORE 10c LESS
For less than 1 bu. add 10c to amount
WEST BRANCH SWEEPSTAKES \$2.00
CORNELL NO. 11 \$2.00
SHEFFIELD FLINT \$2.00
YATES FLINT Sold out
Butt kernels 25c less, tip kernels 50c less
CORNELL 29-3, Certified, flat kernels \$5.00
CORNELL 29-3, Not Certified ditto \$4.75
CORNELL 29-3 round kernels \$4.50
CORNELL 29-3 small kernels \$4.00

POTATOES

All F. O. B. here

In many cases we can deliver truck loads at little more than car load freight rates. Frequently orders of 50 bu. or more can be combined to make truck loads. Ask about delivering your order.

50 bu. or more, 5c less; 100 bu. or more, 10c less Per bu. 60 lbs.
WARBA, Me. & N. Y. cert., U. S. No. 1. \$1.35
WARBA, Me. & N. Y. cert., small 1.35
COBBLER, P.E.I. cert., U. S. No. 1 1.30
COBBLER, N. Y. not cert., U. S. No. 1 .90
COBBLER, N. Y. not cert., small .70
CHIPPEWA, Me. & N. Y. cert., U. S. No. 1 1.20
CHIPPEWA, Me. & N. Y. cert., small 1.20
GREEN MTS., P.E.I. cert., U. S. No. 1. 1.35
GREEN MTS., N. Y. not cert., U. S. No. 1 .90
GREEN MTS., N. Y. not cert., small .70
KATAHDIN, Me.&N.Y. cert., U. S. No. 1 1.10
KATAHDIN, N. Y. not cert., U. S. No. 1 1.00
KATAHDIN, N. Y. not cert., small 1.00
SMOOTH RURAL, N. Y. cert., U. S. No. 1 .90
SMOOTH RURAL, N. Y. not cert., small .70
SMOOTH RURAL, N. Y. not cert., small .50
RUSSET RURAL, N.Y. cert., U. S. No. 1 .90
RUSSET RURAL, N. Y. cert., small .70
RUSSET RURAL, N. Y. not cert., small .50

CABBAGE

Hot Water and Semesan Treated

(Postage Paid) Per lb.
Pkt. Oz. 1/4 to 1 lb. 5 lbs.
Louisiana Copenhagen .15 .40 \$4.00 \$3.50
Golden Acre .15 .40 \$4.00 \$3.50
Copenhagen Market .15 .40 \$4.00 \$3.50
Glory of Enkhuisen .15 .40 \$4.00 \$3.50
Quaker Hill Danish .20 .60 \$6.00 \$5.50
Reed's Red Danish .20 .60 \$6.00 \$5.50

BUCKWHEAT

Per bu. 48 lbs.

10 BUS. OR MORE 5c LESS
JAPANESE \$1.60
SILVER HULL \$1.60

SPRING WHEAT

Per bu. 60 lbs

10 BUS. OR MORE 5c LESS
MARQUIS \$2.25
ALFALFA Highest quality.
300 lbs. or more, 1/4c less
60 lbs. per bu. Per bu. Per lb.
COMMON, hardy northern \$24.60 \$.41
GRIMM, certified, blue tag 28.20 .47
GRIMM, not certified, northern 25.20 .42
ONTARIO VARIEGATED 25.20 .42

CLOVER

Absolutely hardy.

300 lbs. or more, 1/4c less
60 lbs. per bu. Per bu. Per lb.
MEDIUM RED, domestic \$25.80 \$.43
MAMMOTH RED, domestic 25.80 .43
ALSIKE, domestic 21.60 .36
W. B. SWEET CLOVER 7.80 .13
WHITE DUTCH 24.00 .40
Registered KENT WILD WHITE 90.00 1.50
ENGLISH WILD WHITE 75.00 1.25
YELLOW TREFOIL .18

TIMOTHY

Best Grade Obtainable

200 lbs. or more, 1/4c less
45 lbs. per bu. Per bu. Per lb.
BEST DOMESTIC \$2.48 \$.05 1/2
CORNELL No. 1777 Sold out

TIMOTHY & ALSIKE

Highest quality

200 lbs. OR MORE 1/4c LESS
45 lbs. per bu. Per bu. Per lb.
NAT. MIXTURE, 20% Alsike \$4.95 \$.11

MISCELLANEOUS

Fancy grade

100 LBS. OR MORE 1/4c per lb. LESS
Less than 10 lbs. any kind, add 10c
CORNELL PASTURE MIX., Grade A .22
CORNELL PASTURE MIX., Grade B .18
CORNELL HAY-PASTURE MIXTURE .25
CANADA BLUE GRASS .19
KENTUCKY BLUE GRASS .15
ORCHARD GRASS .18
RED TOP .16
REED CANARY GRASS .25
ROUGH STALKED MEADOW GRASS .36
SVALOF VICTORIA PER. RYE GRASS .24
DANISH & NEW ZEALAND ditto .18
JAPANESE MILLET .05
HUNGARIAN MILLET .06
DWARF ESSEX RAPE .10
SORGHUM .07
SUDAN GRASS .06
HAIRY VETCH .13
SPRING VETCH .08

SPECIAL DELIVERED PRICES ON TRUCK LOADS OR CAR LOADS

SEED TREATING MATERIALS

ALL POSTAGE PAID EXCEPT AS NOTED

NITRAGIN LEGUME INOCULANTS:—

CULTURE A for alfalfa, sweet clover, 1/2 bu. size 30c; 1 bu. size 50c; 2 1/2 bu. size \$1.00.
CULTURE B for medium, mammoth, alsike, white, crimson clovers, 1/2 bu. size 30c; 1 bu. size 50c; 2 1/2 bu. size \$1.00.
CULTURE C for vetches, field peas and garden peas, 1/2 bu. size 25c; 1 bu. size 40c; 5 bu. size \$1.70; 12 1/2 bu. size \$4.00.
CULTURE D for field and garden beans, 1/2 bu. size 25c; 1 bu. size 40c; 5 bu. size \$1.70; 12 1/2 bu. size \$4.00.
CULTURE S for soy beans, 1 bu. size 30c; 5 bu. size \$1.00; 10 bu. size \$1.60.
STANLEY'S CROW REPELLENT, 1/2 pt. treats 1 bu. corn; 1/2 pt. 60c; pt. \$1.00; qt. \$1.75.
CERESAN for oats, barley, wheat, 1 lb. treats 32 bu.; 1 lb. 70c; 5 lbs. \$3.00.
SEMESAN, JR. for corn, 2 oz. per bu.; 4 oz. 30c; 1 lb. 75c; 5 lbs. \$3.25.
SEMESAN for vegetables and flower seeds and bulbs; 2 oz. 35c; 1 lb. \$2.25; 5 lbs. \$9.90.
SEMESAN BEL for potatoes; 1 lb. per 60 to 80 bu.; 4 oz. 45c; 1 lb. \$1.50; 5 lbs. \$6.75; 25 lbs. \$31.00.

CORROSIVE SUBLIMATE. For potatoes, cabbage, etc., in 1/4 lb. boxes; 1/4 lb. 50c; 1 - 4 lbs. \$1.60 per lb.; 5 lbs. up \$1.50 per lb., express collect. Special prices on bulk lots.
YELLOW OXIDE OF MERCURY for potatoes, 1 lb. treats 100 to 150 bu.; 1/2 lb. \$1.10; 1 - 4 lbs. \$1.80 per lb.; 5 lbs. up \$1.10 per lb.
CALOMEL for cabbage, turnip, radish, 1/2 lb. \$1.10; 3/4 lb. \$1.50; 1 - 4 lbs. \$1.80 per lb.; 5 lbs. up, \$1.60 per lb.
RED OXIDE OF COPPER for peas, spinach, beets; 1/4 lb. 35c; 1/2 lb. 50c; 1 lb. 80c; 5 lbs. \$3.50. Special prices on larger quantities.
ZINC OXIDE for seed beds, 1/2 to 1 oz. per sq. ft.; 1 - 9 lbs. 25c per lb.; 10 - 49 lbs. 20c per lb., postage paid. Freight collect 50 lb. bags, \$7.50; 100 lb. bags \$13.00.
GRAPHITE, for coating peas to prevent breakage after treating; 2 oz. per bu.; 1/4 lb. 25c; 1/2 lb. 30c; 1 - 4 lbs. 35c per lb.; 5 lbs. up, 30c per lb., postage paid. Freight collect, 100 lb. bags, \$16.00.
GUM ARABIC POWDER, to make calomel stick to cabbage seed; 1 oz. per lb. seed, 1 oz. 15c; 2 oz. 20c; 1/4 lb. 30c; 1/2 lb. 50c; 1 lb. 85c.
FORMALDEHYDE, for seed treating and soil disinfecting, (40%); 1 lb. can 40c; 5 cans up 35c each. Special prices on large quantities in bulk.



ORDER FORM

K. C. LIVERMORE, Honeoye Falls, N. Y., Dear Friend:— I wish to order the following:

.....lbs., bus. or bags.....

@.....per.....\$.....

.....@.....per.....\$.....

.....@.....per.....\$.....

.....@.....per.....\$.....

.....@.....per.....\$.....

.....@.....per.....\$.....

.....@.....per.....\$.....

TERMS: Cash with order, or 20% cash with order and balance before shipment or on arrival with collection fees added. If balance is to be paid on delivery, give name and address of bank.

Bank.....P. O.....State.....

Total \$.....

Check or M.O. \$.....

Balance \$.....

Ship to (person).....P. O.State.....

Freight or express station.....State.....Railroad.....

Shipping instructions.....

Name and address of person ordering, if different from above.....

MIXED FERTILIZER AND FERTILIZER INGREDIENTS

For Sale in New York Only

Less than carloads distributed by truck within reasonable distances of Albany, Amsterdam, Binghamton, Elmira, Ithaca, Rochester, Schenectady, Syracuse, Utica, Waterloo, Watertown.

Carloads can be shipped anywhere in New York.

We offer this season the well made and favorably known Corenco Fertilizers. They are guaranteed as to analysis and condition. In the Red Tag Brands most of the nitrogen comes from ammonium sulphate. They are suitable for use on high lime soils and will help check potato scab. They should not be used on acid soils. The Corenco Brands contain nitrate nitrogen and organic nitrogen. They are better for acid soils and good on lime soils also. Sacked 100 lbs.

CASH PRICES PER TON DELIVERED			
Analysis	Red Tag	Corenco	
8-16-14*	\$50.85		Super phosphate, 20% pulverized \$21.29
4-8-7*	31.37	\$33.17	Super phosphate, 20% granular \$21.74
4-8-12	32.76	34.56	Nitrate of Soda 16% \$38.61
5-10-5	32.04	33.84	Sulphate of Ammonia 20.5% \$37.49
4-16-4	33.89	35.69	Muriate of Potash 51% \$37.80
4-12-4	31.50	33.30	Write for lower prices on carloads of the mixed goods or ingredients delivered and on truckloads of the ingredients f.o.b. Baltimore.
2-8-5	25.97		

*Magnesium added.

ALLOWANCE FOR TRUCKING

If you wish to truck your fertilizer from any of the cities listed above, we will allow you 75c per ton for the 1st 5 miles and 3c per mile for each additional mile, the total not to exceed the freight rate to your station.

HOW TO ORDER FERTILIZERS

- Send 20% or more cash with order and be prepared to pay balance on delivery.
- If you wish it delivered, state when and give directions for reaching your place from the nearest town on a main road. (Seeds are not delivered with the fertilizer.)
- If you wish to do the trucking, state which of the above places you wish to draw from and the date you will go for it. We will send you the address and the necessary papers.
- Order early.

CASH BUYING SAVES AT RATE OF OVER 20% PER YEAR

OTHER MATERIALS FOR IMPROVING THE SOIL

MANGANESE - One of the elements essential for healthy growth of plants and animals. Sometimes it becomes so deficient in the longer farmed soils that crops do not thrive and small applications, 20 to 100 lbs., greatly improve results. Usually applied as manganese sulphate mixed with fertilizer or broadcast alone or even sprayed on crops in solution. It can be mixed with the seed in some cases. Prices f.o.b. here: Manganesc sulphate, 80% with 15% ammonium sulphate, \$5 per cwt., \$46 per ½ ton, \$90 per ton.

MAGNESIUM - Another essential element that sometimes becomes deficient in soils here in the East. It can be applied as above in the form of magnesium sulphate or as ground dolomitic limestone applied alone or in fertilizer. Prices f.o.b. here Magnesium sulphate \$2.75 per cwt., \$26 per ½ ton, \$50 per ton; ground dolomitic limestone, f.o.b. plant, \$3.50 per ton.

LIMESTONE - This furnishes calcium, another essential for thrifty plant growth. Lime also counteracts acidity of the soil. Thousands of acres are too acid for profitable cropping or pasturing. Pulverized limestone is the cheapest material to correct this. Amount to use best determined by soil test by county agent or "Ag" teacher. Growers should combine to use car load and save on cost. Write for delivered carload or truckload prices.

SULPHUR - Another essential in plant production but seldom deficient in soils under ordinary management. However certain plants such as rhododendrons, blue berries, watermelons require more acid soils than others and sulphur is the best material to increase acidity.

POTATO SCAB is caused by a fungus that cannot live in a soil that is sufficiently acid (pH 5.5) so the disease can be controlled by sulphuring soils that produce scabby potatoes. The same treatment also controls scab gnat and milliped injury. Apply sulphur only where needed; apply from 200 to 800 lbs. per acre depending on the severity of the scab, apply after plowing and drag thoroly. Use our Free Flow Potato Sulphur. It drills better and is economical. One application lasts years. Prices freight paid in N. Y., N. J., Pa., Conn., R. I., or Mass., \$2.30 per cwt., \$45.00 per ton; f.o.b. here, 3c lb., \$2.10 per cwt., \$40 per ton.

DRAIN TILE - Tile draining is the farm owner's best investment. Prices at our yard are, per 1,000: 3" - \$36.00: 4" - \$44.00: 6" - \$85.00. Write for truckload or carload prices.

DUST AND SPRAY MATERIALS

Our prices on dust and spray materials for field and garden crops will be given on a special circular. Ask for copy. Don't let bugs and disease steal your profits. Better be prepared to combat them.

IMPROVE YOUR SEEDS—PROTECT YOUR CROPS